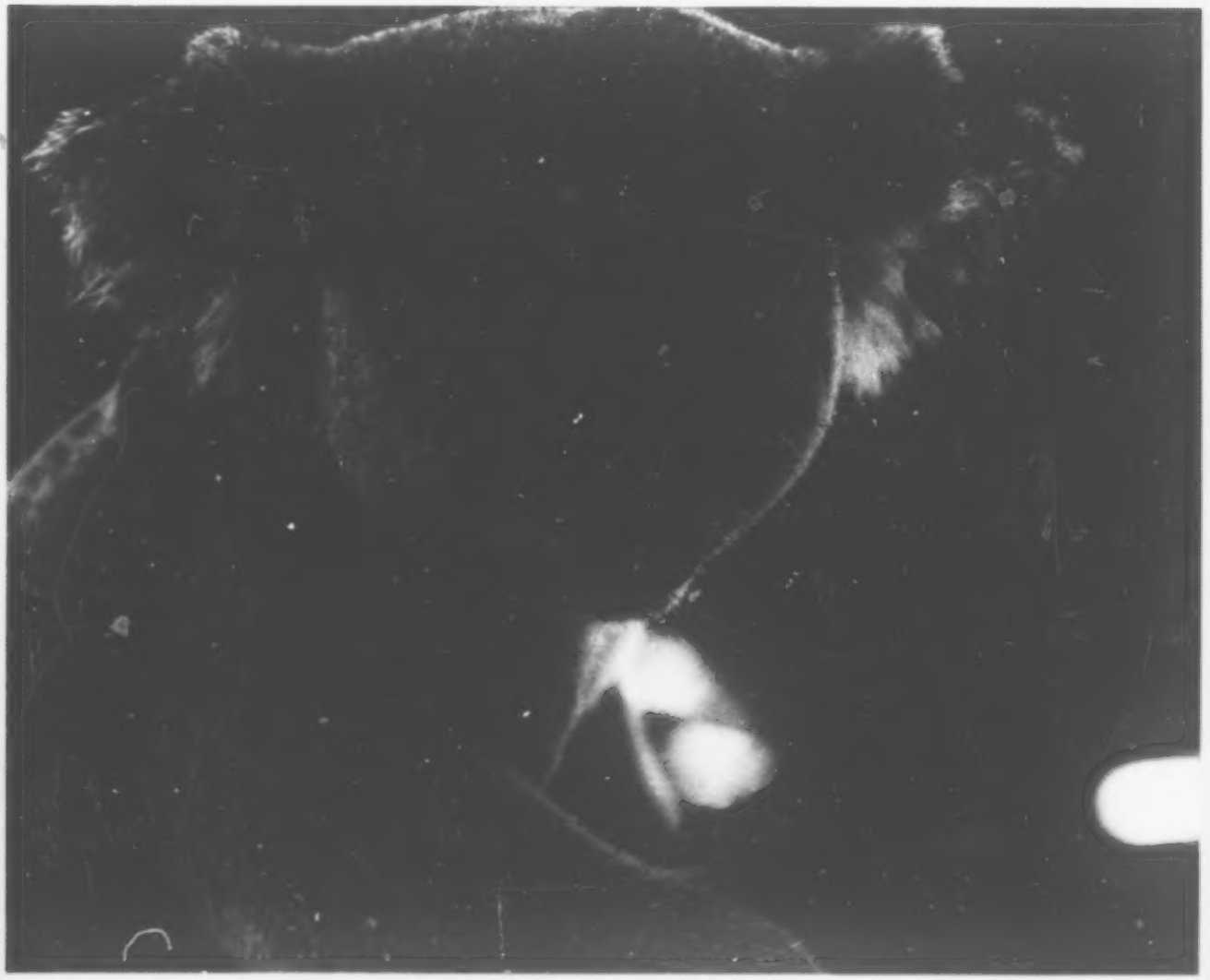
Telephony

AN INTERTEC PUBLICATION FEB. 26, 1990 INTEGRATING VOICE & DATA COMMUNICATIONS $3



THROW ANOTHER PHONE ON THE BARBIE Telecommunications

Down Under is more complex than just saying g'day

FBI PROBES FTS 2000 ESPIONAGE

Ex-employees claim US Sprint spied on competitors to win contract

PUERTO RICO TEL GOES ON AUCTION BLOCK

Governor wants to sell island telco for $2 billion

MONDAY, FEBRUARY 26, 1990 Volume 218, No. 9

Telephony

INTEGRATING VOICE & DATA COMMUNICATIONS

Australia not only supports diverse and unique animal life, such as koalas and kangaroos, but it also must support diverse and unique telecom needs. Cover photo by Ira Block, Image Bank

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TELEPHONY (ISSN 0040-2656) is published weekly except semi-weekly the first week in July by Telephony Division, Intertec Publishing Corp., 55 E. Jackson Blvd., Chicago, IL 60604. Postmaster: Please send address changes to Telephony Subscription Dept. Intertec Publishing Corp., P.O. Box 12948, Overland Park, KS 66212. Second class postage paid at Chicago, IL, and at additional mailing offices. Single copies (payable in advance) U.S. $3.00 ea. Outside U.S. add $1.00 ea. Subscriptions: $95 one year. Outside U.S. $81 per year. Subscription rates apply to employees of operating telephone companies, telephone consultants, contractors, interconnect companies, specialized common carriers, military, government, associations, private communications users, schools, libraries. Change of address: include old address as well as new address. Attach issue label if possible. Allow 4 weeks for change to become effective. Copyright 1990 by Telephony Division, Intertec Publishing Corp. All rights reserved. Permission to photocopy for internal or personal use or the internal or personal use of specific clients is granted by Telephony for libraries and other users registered with the Copyright Clearance Center (CCC) provided that the fee of $1.50 per page is paid directly to CCC, 21 Congress St., Salem, MA 01970. Special requests should be addressed to publisher.

In My Opinion

Grasping hands across the water

Earlier this month the telecommunications administrations of Singapore and Brunei agreed to a new accounting arrangement for traffic between their countries. Singapore Telecom will keep all the revenue generated by its subscribers calling Brunei, and Brunei Telekom Darussalam will do the same for calls to Singapore.

The apparently uncontentious nature of this "no-accounting" agreement may have been responsible for its passing without any banner headlines. The initiative is, in fact, highly controversial and may prove to be the opening shot in a conflict that could bring the whole edifice of international telecommunications accounting tumbling down like a house of cards.

The present mechanism for international traffic accounting essentially involves an equal division of call revenues. The originating country collects the revenue and reimburses the terminating country, based on volume.

Where there is an imbalance of traffic between two locations, the originator of the highest traffic volume suffers a net outflow of funds. While this may amount to billions of dollars—some observers put AT&T's annual shortfall at over $2 billion—it can at least be partially justified by the fact that the receiving network is used more as traffic volumes rise.

Things really start to go awry when one national operator modernizes a network and can lower the cost of service provision. In this case the number of outgoing international calls can be expected to rise against incoming volumes from less-modern operators.

As a result, the good guys are penalized. To avoid this situation, some international tariffs are kept artificially high and users lose out. Significantly, the main rationale for the initiative of Singapore and Brunei is that their customers will thereby obtain lower tariffs.

Changing the global system won't be easy, since many operators obviously have a vested interest in maintaining the status quo. Indeed, many in the developing world would rather see revenue imbalances in their own favor increased rather than eradicated as a way to provide additional investment resources for their local national network expansion projects.

Nor does competition in the form of additional carriers necessarily facilitate change. A country with several international carriers intent on undercutting each other risks coming off worse in any rate auction conducted with countries that have a single international carrier.

Despite this situation, change is surely coming. An OECD discussion document on the subject is currently making the rounds, and there are those campaigning for the inclusion of international accounting within the purview of the GATT. The push of user expectations allied to the pull of multilateral service liberalization, however, will be more potent than deliberations in such international arenas.

John Wilson

Telephony

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GTE, according to Fritz Ringling, a principal of Robert A. Sayles Associates Inc. GTE has the resources and cash flow to make a bid, as well as experience in Latin America, where it owns the Dominican Republic's local telephone company, Compagnia Telefonos Dominicana, Ringling said.

GTE would not comment on specific bid plans. "If indeed the privatization takes place, we will follow it with interest," a GTE spokeswoman said.

Foreign telecommunications companies may also show some interest in the telco. However, foreign ownership is limited to 20% under Federal Communications Commission rules, according to officials working on the sale.

Nynex Materiel accused again of overcharging

Charles Mason
Washington Editor

An audit conducted by the New York State Public Service Commission found that New York Telephone was overcharged between $25 million and $28 million for the removal of CO equipment by Nynex Materiel Enterprises Co.

The auditor's conclusion that New York Telephone's cost and project control during the equipment removal process were totally inadequate comes two weeks after the Federal Communications Commission also accused MECO of overcharging Nynex's two telephone companies by $118 million *(Telephony, Jan. 12, page 3)*.

In a related development, Nynex announced last week the formation of a venture that will sell office equipment and furnishings to its telcos and others. The business will be part of MECO, Nynex's centralized purchasing arm that provides equipment and supplies to New York Telephone and New England Telephone. State regulators said they would closely examine any intracompany dealings between the telcos and the new venture.

The PSC CO audit was sharply critical of the relationship between MECO and New York Telephone. The investigation "revealed a disorganized effort" that lacked management attention, overall coordination and the planning and oversight needed to minimize cost and maxi-

continued on page 14

Telephone costs decline 5% in '89

Charles Mason, Washington Editor

Rates for local telephone service moved slightly higher last year, but those increases were offset by a continuing decline in rates for long-distance service. After adjusting for the 4.6% national inflation rate, the real cost of telephone service actually fell about 5% in 1989, according to data released by the Federal Communications Commission.

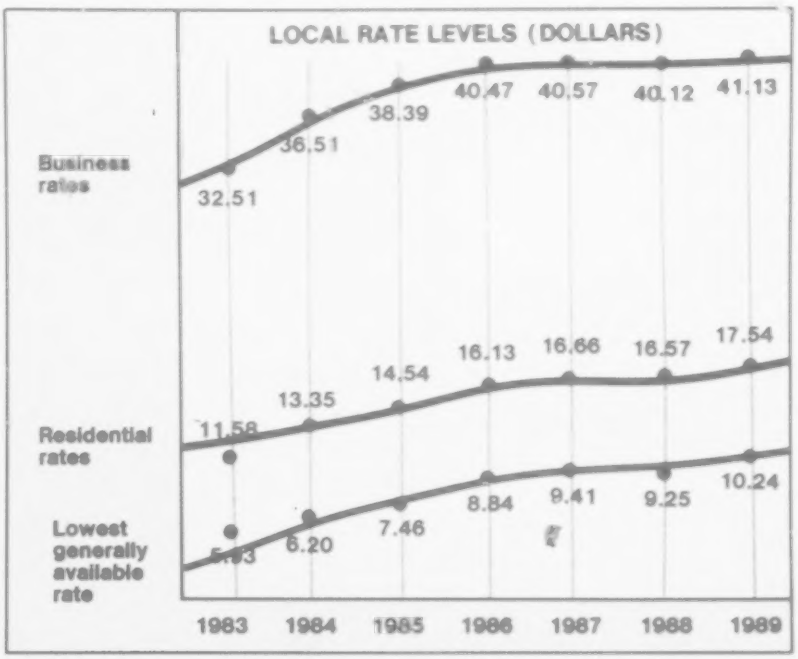
Local rates were up 0.6% while the cost of interstate calling declined 1.3% and the cost of state toll calls fell 2.6%, the FCC said. Overall, the U.S. Consumer Price Index for phone service fell 0.3%.

The number of subscribers hit an all-time high of 87 million households, the agency said. An estimated 93% of all households have a phone, according to the U.S. Census Bureau.

On the long-distance side, more than 90% of the nation's telephone lines have been converted to equal access and more than 300 of the nation's 500 long-distance carriers now use equal access, the FCC said.

During 1989, rate reductions and refunds ordered by state regulatory commissions exceeded the dollar amount of rate increases granted for the third year *(Telephony, Feb. 19, page 8)*. In addition, there were few significant rate cases pending at the beginning of 1990, the FCC said.

The national average monthly charge for residential local service with unlimited calling was $12.28 in October 1989, the FCC said in a separate report. The total cost, including subscriber line charges and taxes, averaged $17.54 per month.



The average rate for the lowest-priced, generally available service was $10.24 per month, including subscriber line charges and taxes.

Businesses with one line paid an average of $41.13 a month for service, which included SLCs, tone dialing, taxes and 200 five-minute messages in areas where unlimited local calling was not offered. For multiple lines, businesses paid an average of $51.40 per line.

As for future trends, no significant increases in the cost of local service are expected during the next several years, the FCC report said. Noting that there are no major rate cases pending and that the SLC is not scheduled to increase, the agency said rates could actually drop in 1991 if the federal telephone service excise tax expires as scheduled. However, other tax considerations could force rates up slightly, the report predicted. But rates should increase at a slower rate than inflation, the FCC said.

Throw another phone on the barbie, mate

There's more to Australia than koalas, kangaroos and Crocodile Dundee. It is an island almost the size of the United States with unique telecom needs

PAUL TRAVIS, Executive News Editor

Don't let Crocodile Dundee fool you. There's a lot more to saying *g'day* Down Under than he would admit. The telecommunications industry in Australia always has faced unusual challenges in bringing service to customers, thanks in part to the diverse geographic nature of this island continent.

Australia has a land mass nearly the size of the United States and a rugged geography that ranges from blistering deserts and thick rain forests to beautiful coastal stretches and remote, uninhabitable outback regions. In addition to supplying sophisticated services to the six major cities that are home to almost 80% of the country's 18 million residents and most of its commercial enterprises, the industry also has to serve isolated sheep and cattle ranches and mining communities that depend on communications links as their lifeline to civilization.

Australia has taken the standard, worldwide approach to meet its challenges. It created three government-owned monopolies to provide telecommunications services: Australian Telecommunications Corp., the domestic telephone company commonly known as Telecom; OTC Ltd., the international carrier; and Aussat Pty. Ltd., the satellite service pro-

vider. These companies have provided one of the world's largest islands with widely available, reasonably priced, sophisticated communications services.

Today, however, the industry may be facing its greatest challenge: The introduction of competition and a new form of regulation into what has been a monopoly industry. Just how far Australia's socialist government intends to travel down that open road still is not clear, but the changes it already has implemented are the most dramatic and far-reaching ever.

A New Face

Last June Australia adopted a new telecommunications act that rewrote the rules of the game for the telecommunications industry. The act created the country's first communications regulatory agency—the Australian Telecommunications Authority, known as Austel, to monitor and regulate the three major carriers, set technical standards and license competitors. It also opened several markets to competition, including inside wiring, most customer premises equipment and value-added services. And the government also implemented a price-cap plan for most services.

The new legislation brought cries of anguish from the carriers and harsh criticism from many users, especially business users who said the legislation didn't go far enough in promoting competition. They were particularly unhappy that the government would continue to restrict shared use and resale, and maintain the carriers' monopoly over a wide range of basic services.

But the government says users are too quick to judge.

"This is only the beginning, not the end of the process," says Vanessa Fanning, first assistant secretary in the telecommunications policy division of the Department of Transport and Communications. "Change will continue. We are in an evolutionary state. There is flexibility in the legislation so that the boundaries of monopoly can be redrawn."

The existing monopoly carriers still have the exclusive right to provide public switched voice, data, text and video services, integrated services digital networks, private-line services and mobile services. In addition, Aussat retains a monopoly over domestic satellite services and Telecom keeps its monopoly on pay phones. Customers still must obtain their first telephone set from Telecom until June 30, 1991, although they can buy additional equipment from other suppliers.

Australia is inching slowly toward competition because it wants to "avoid the specter of chaos and cost increases to consumers that we've seen in other countries. We want to do it in a managed way," explains Neil Primrose, assistant secretary for international policy in the DTC's telecommunications policy division.

How well Australia manages its telecommunications transition will be determined by the country's new regulatory czar. The man in the hot seat, Austel Chairman Robin C. Davey, describes himself as a facilitator, not a regulator. "Regulators stop things," he says. "We're here to make things happen."

But Davey also knows he must be careful about what he makes happen. "Telecom is the second-largest employer in Australia. Politicians have lost seats over telecommunications issues such as timed local calls and competition," he says.

This will be the year that the new regulatory agency gets down to business and tackles tough issues such as whether the government should license a second cellular carrier, what standard should be used for digital cellular and what approach to take on personal communications services such as CT2.

Get Down

This will be the year that the new regulatory agency gets down to business and tackles tough issues such as whether the government should license a second cellular carrier, what standard should be used for digital cellular and what approach to take on personal communications services such as CT2. Although Austel has yet to make any major regulatory rulings, the new law and the agency have started to produce results, Davey maintains.

"Since July 1, key systems' prices have dropped 30%," he says. "The consumer is starting to see the benefits of competition. We've set standards for cablers and have issued some licenses. We expect to end up with 10,000. We also issued a class license for value-added services and now we have hundreds of VAS providers. We want to let people provide service without coming to the government and asking permission."

To Davey, a former lawyer, it is important that regulatory proceedings don't become an "adversarial process like in the United States. We don't want to become tied up in legalities. I've told companies, 'If you want to talk, come in and talk. But don't bring your lawyers.' "

The warnings haven't done much good, however. The U.S. tradition of fighting high-stakes regulatory battles with mountains of paper already has surfaced.

For example, cellular service is growing at 8% a month and should reach 200,000 subscribers by the end of the year. That dramatic growth has caused a lot of companies to urge the government to authorize a second carrier. Twenty-nine companies filed close to 2500 pages of submissions on the subject. Only those involved with Telecom, the monopoly cellular supplier, including its unions and its switch supplier, Ericsson, argued against competition. The largest

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FIGURE 1 TELECOM AUSTRALIA'S FIBER PLANS

Another Phone *continued*

filing—473 pages—was made by Link Telecommunications, a paging company that is 80% owned by BellSouth, Davey says. Austel expects to make a recommendation to the government on the issue by the end of March.

The cellular issue has even caused intramural squabbling among Australia's carriers. Aussat supports a second cellular license, and hopes its satellites will be used to create a new network to compete with Telecom, which owns 25% of the satellite carrier. Aussat is currently limited in the types of services it is allowed to offer, a limitation that has caused Managing Director Graham Gosewinckel to publicly complain that the company "has been subject to more regulation than any other industry or technology. The restrictions were aimed at ensuring that the satellite would be no threat to Telecom's monopoly position. Those regulations were put there and remain there to protect Telecom."

Besides dealing with the hot competitive issues, one of Austel's top priorities is to establish technical standards and develop reciprocal agreements with countries such as the United States, the United Kingdom, New Zealand and Japan so equipment approved in one country can be sold in others. "They're doing that in the European Community. If we can develop reciprocity agreements, it will help Australian companies sell overseas," says Bob Horton, general manager of Austel's technical standards division.

Australia's monopoly carriers dodged a bullet when the new telecommunications act reaffirmed their exclusive right to provide basic telecommunications services.

But given the growing demands by users for more choices and the developments in other countries, the three don't believe their monopoly will last forever. They are moving quickly to provide the latest in services with the most modern technology to pre-empt any competition that the government may authorize.

OTC, which provides international satellite and underseas cable links to 240 countries, is introducing ISDN, signaling system 7, high-speed data and virtual private network services this year. It is the largest investor in the PacRim underseas fiber network, which will link Hawaii, New Zealand, Australia, Guam and Asia.

"In the last few years, demand for services within our region has been booming. We act like we're operating in a much more competitive arena than we really are," says John N. Hibbard, manager of business development.

Aussat, which has about 100 earth stations providing service to remote areas, is banking on a high-powered L-band satellite scheduled for launch in 1992 to put it in the forefront of satellite-based mobile services. The new telecommunications act allows it to expand its private network services to New Zealand and New Guinea.

Officials hope that further liberalization will

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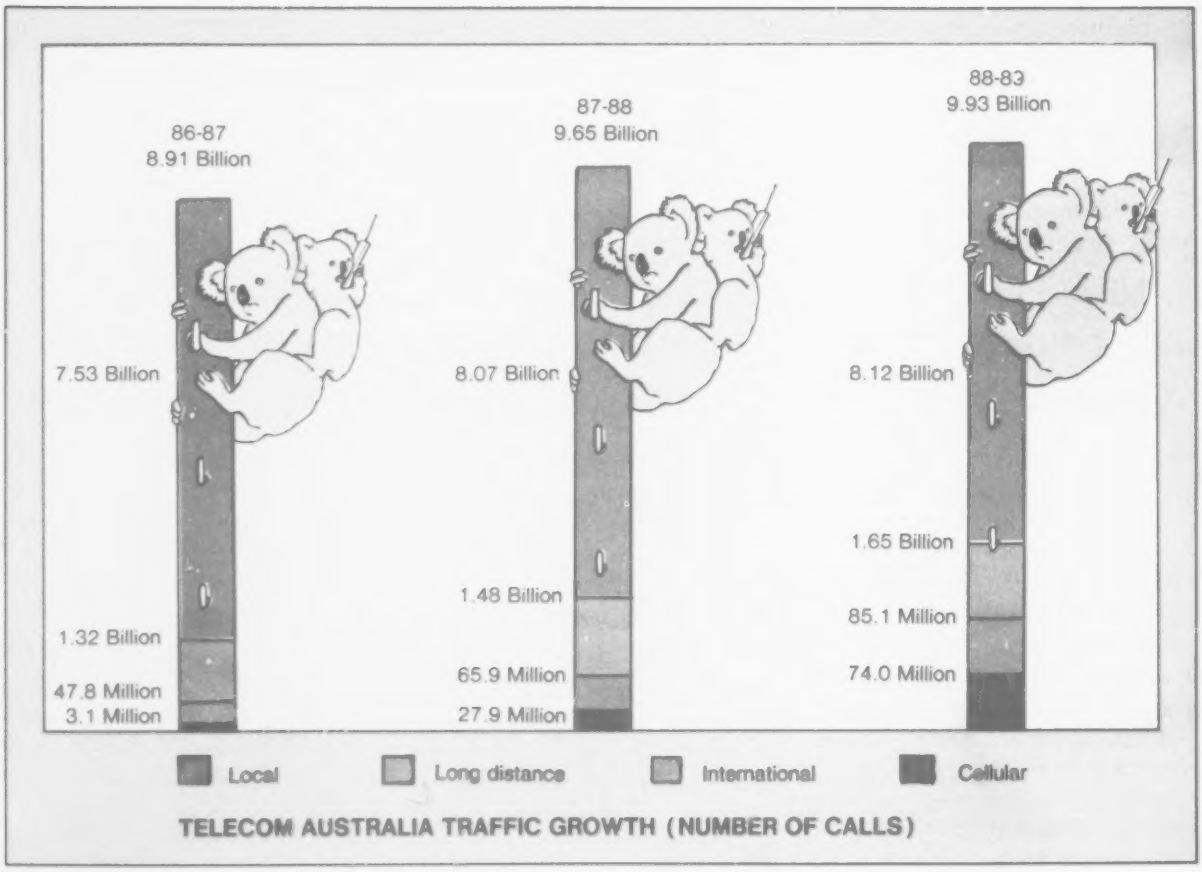

TELECOM AUSTRALIA TRAFFIC GROWTH (NUMBER OF CALLS)

Another Phone *continued*

allow the company, which primarily provides video transmission, to enter the public-switched services market, including nationwide paging and cellular service. "We are under-capitalized and limited in the markets we are allowed to serve. We would like wider access. We think we could make a real contribution," says Richard C. Johnson, Aussat's general manager.

Telecom has upgraded its network to the point that officials believe it rivals any in the world. On the transmission side, it has digitized its microwave network, laid fiber cables to link the major cities and is constructing a fiber ring that should encircle the entire island by 1995, according to Mike Hannagan, project officer in Telecom's network engineering department.

The telco has digital exchanges serving about 20% of its access lines. It introduced primary rate ISDN last year in eight network nodes and expects to have it in 30 nodes within a few years. About 30 businesses have signed up for primary rate ISDN service, including banks, utilities, engineering firms and computer companies. Telecom has implemented a nationwide SS7 network and has ambitious plans to introduce intelligent network services this year using Northern Telecom's DMS-100 switches. The company already is offering electronic white page directory service nationwide.

Having a monopoly on landline and cellular services has allowed Telecom to integrate the two to offer nationwide roaming services with an integrated national numbering plan.

The company also is financing research in leading-edge technologies such as fast-packet switching and artificial intelligence for network management. Because it doesn't manufacture equipment, Telecom is getting a lot of support and the latest technology from suppliers who believe Australia is a perfect market to test new services and products.

Gateway to a Gold Mine

The introduction of limited competition has made an already attractive market even more appealing to the world's major telecommunications companies, which have been supplying locally-made equipment to Telecom and OTC for use and resale for decades. The combination of an educated and skilled workforce and a stable political and economic environment has attracted more than 200 equipment manufacturers, including Alcatel, Ericsson, Fujitsu, GEC-Plessey Telecommunications, NEC, Northern Telecom, Philips and Siemens. They produce more than $1 billion worth of equipment each year and employ more than 12,000 Australians.

Until recently, supplying the carriers was the main business. And the Australian rules sometimes have produced unique results. Telecom, for example, decided to standardize its network on Ericsson's AXE central office switch and has become one of Ericsson's largest customers. But, because Telecom requires two suppliers for key network products, Alcatel-STC also builds AXE switches in Australia

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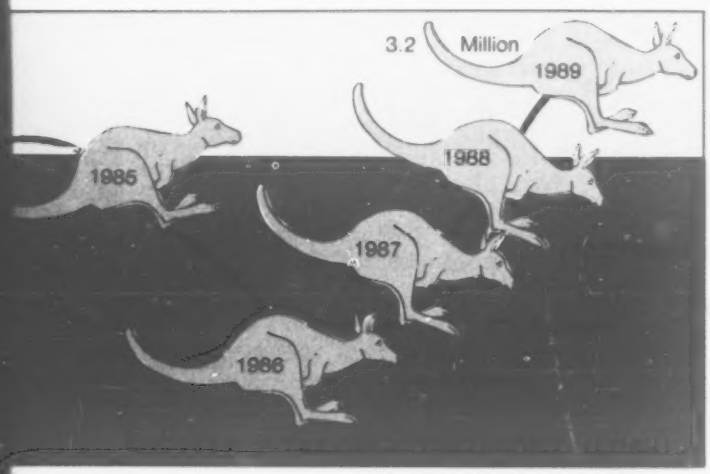
under license from Ericsson, and the companies compete for contracts. More than 2 million AXE lines are installed or on order in Australia, according to Ericsson. Alcatel has won half of the AXE switching business, and "we're still pushing Telecom to consider using the System 12," says Spencer Bell, Alcatel marketing director.

Many companies have benefited because Australia's carriers don't do their own manufacturing. NEC and Codan produce satellite equipment. Siemens manufactures lightweight transportable masts, towers and shelters for use in the country's remote regions. Northern Telecom supplies intelligent network technology to Telecom. Alcatel-TCC (Tasman Cable Company Pty. Ltd.) has just finished building



a new $80-million plant to manufacture underseas fiber optic cables. Siemens and Jtec build ISDN protocol testers for Telecom.

The opening of the CPE market has created additional opportunities for PBX manufacturers such as Ericsson, Northern Telecom, NEC, Siemens, GPT and Fujitsu, and key system makers. Austel's Davey predicts that the large number of competitors will ensure that Australian consumers get the latest technology and the cheapest possible price.

In addition to the newly liberalized domestic market, there is another reason why major telecommunications companies are pouring money and resources into Australia, says Ken V. Loughnan, managing director of Telecom Australia International Ltd.

"We are the gateway to the Asian-Pacific market. The main growth area for the next 100 years is here, and we're the only fully developed country. Companies like Fujitsu, Ericsson and Northern Telecom are placing their headquarters in Australia to springboard into Asia," he says.

With a multibillion dollar trade deficit, the Australian government is doing everything it can to foster exports of high technology. One program has won commitments from 18 organizations and companies, including Ericsson, GPT and Northern Telecom, to spend hundreds of millions of dollars in research and development of high-tech products for export. The government also has set up an advanced electronics development center that has attracted funding from IBM, NEC, Siemens, Hewlett-Packard and a dozen other companies.

Leading the charge overseas have been the international arms of Telecom and OTC, which have achieved some success selling their network management and systems integration services internationally.

"TAI was three years old in October and we have a staff of about 200. We expected to do $3 million of business in 1989, but we're doing $50 million worth. We have 160 contracts in 32 countries," says TAI's Loughnan.

TAI's biggest success was winning a contract to manage Saudi Arabia's telecommunications network for the next three years, beating out Bell Canada, which held the contract for 10 years, and a joint bid from Deutsche Bundespost, Southwestern Bell and Swedtel, the international consulting arm of the Swedish PTT. TAI also has entered into several joint ventures with equipment manufacturers, including one with Alcatel to supply a fiber network to Pakistan and one with Ericsson to be the second switch supplier in Indonesia.

"Because of our successes," boasts Loughnan, "every major manufacturer has been through my door asking how they can work with us. And every major telco—including the Bell companies—has been through that door, asking the same thing."

OTC International has adopted an unusual approach in its aggressive effort to win overseas contracts: It offers countries a risk-free, profit-sharing deal. "We go in and build satellite facilities and then get a share of the profits to pay for it. The profits turn out to be pretty good in lesser developed countries," explains Daniel J. Maurice, manager, business networks and services.

That approach has proven especially attractive to underdeveloped countries that don't have much hard currency to pay for networks such as Vietnam, Cambodia and Laos. "After our dealings in those countries, we've been approached by a number of socialist countries, like Mongolia and Afghanistan. We expect to grow our $10 million operation to $300 million in five years. The South Pacific cries out for satellite solutions. After that, Eastern Europe and the Indian Ocean are next. We've even talked to the Bell regional holding companies about submitting joint bids," says Maurice.

Besides chasing business in its own part of the globe, the government's export drive has targeted the U.S., which some Australians jokingly refer to as the "Far East." As part of this effort the Australian Trade Commission will sponsor a booth at SUPERCOMM '90 to show off a host of products that it believes will appeal to American telephone companies and business customers. It will be the first time ATC has attended SUPERCOMM.

"We want the United States to know that there is more to Australia than Crocodile Dundee, koalas and beautiful beaches. We will be showing a wide range of products—from remote line testing equipment from Teletech to intelligent multiplexers from Scitec—that have been tested and proven in our own network," says Andy Fung, trade commissioner for the communications industry. ■